



# NHCOC<sub>n</sub>H<sub>2n+1</sub> 鎖を有するテトラヘドラルなトリフェニルメタノールとトリフェニルアミン誘導体の分子集合体

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## Molecular Assemblies of Tetrahedral Triphenylmethanol and Triphenylamine Derivatives Bearing –NHCOC<sub>n</sub>H<sub>2n+1</sub> Chains

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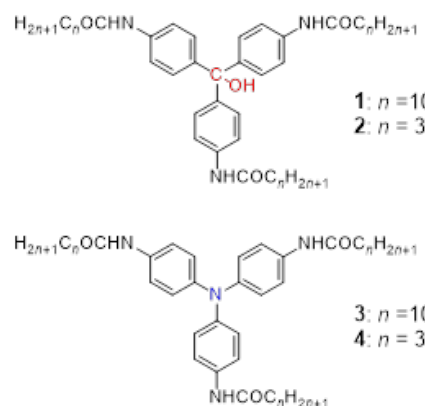


Figure 1. Molecular structures of triphenyl methanol (1 and 2) and triphenylamine (3 and 4) derivatives.

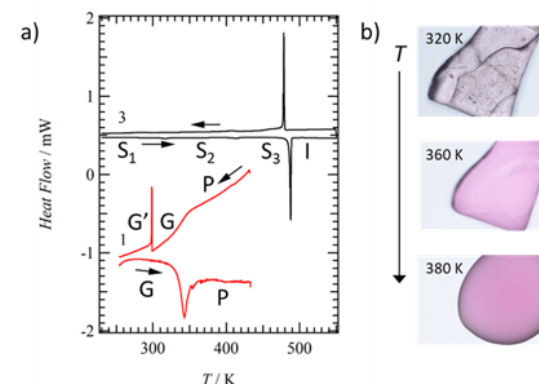


Figure 2. Thermal behavior of 1 and 3. a) DSC charts of 1 (red) and 3 (black) for the first scan. b) POM images of a crystal of 1 at 320, 360, and 380 K.

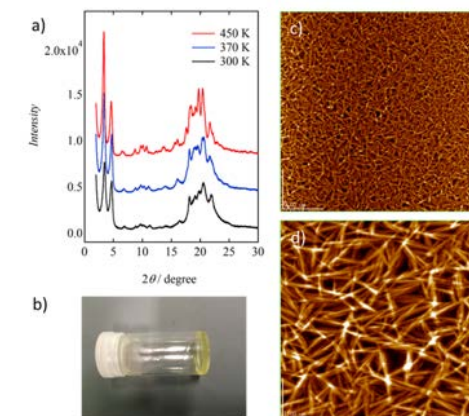


Figure 3. Molecular assembly structures of 3. a) T-dependent XRD patterns b) Photograph of a transparent organogel in nitrobenzene. Dense nanowire array on a mica surface with a scale bar of c) 5  $\mu\text{m}$  and d) 1  $\mu\text{m}$ .

Nonplanar three-fold symmetrical triphenylmethanol and triphenylamine derivatives bearing three alkylamide chains were studied in terms of their phase transitions, molecular assemblies, nano- or meso-structures, and dielectric responses. Slight modification of the structural core from a hydroxyl moiety to a nitrogen atom drastically changed the molecular assembly structures and physical properties of  $\alpha$ -type frequency- and temperature-dependent dielectric relaxation.

非平面で三回対称なアルキルアミド置換トリフェニルメタノールとトリフェニルアミン誘導体の相転移挙動、分子集合体、ナノおよびメソ構造および誘電特性を評価した。分子中心の構造をヒドロキシからアミンへ僅かに変化させることで、分子集合体構造と  $\alpha$  タイプの誘電緩和現象が劇的に変化した。